IN THE SPECIFICATION:

Paragraph beginning at line 12 of page 3 has been amended as follows:

The present invention has been made to solve the foregoing problem of the prior art, and an object of the present invention is therefore to provide a smart battery pack using an N-channel MOS transistor, which has characteristics superior to those of a P-channel MOS transistor, on the Lo side of the smart battery pack.

Paragraph beginning at line 3 of page 5 has been amended as follows:

An embodiment of the present invention is described below with reference to the accompanying drawings. Fig. 1 shows a smart battery pack according to Embodiment 1 of the present invention. The smart battery pack has, as in the prior art, a plus side terminal 11, a minus side terminal 12, terminals 13 and 14 for communicating with an electronic device, a resistor 3 for current detection, and a secondary battery 10.

Paragraph beginning at line 10 of page 5 has been amended as follows:

While the prior art uses P-channel MOS transistors on the Hi side, the present invention employs N-channel MOS transistors 24 and 25 on the Lo side.

Paragraph beginning at line 13 of page 5 has been amended as follows:

A protection or protective circuit 21 for protecting the secondary battery 10 has a function similar to the one in prior art and controls ON/OFF of the N-channel MOS transistors 24 and 25 in accordance with the state of the secondary battery 10. For instance, when the secondary battery 10 is in an over-discharged state, the protective circuit 21 turns the N-channel MOS transistor 24 off to prohibit discharge whereas the protective circuit 21 turns the N-channel MOS transistor 25 off to stop charging when the secondary battery 10 is in an overcharged state.

Paragraph beginning at line 19 of page 6 has been amended as follows:

A calculation circuit 22 for calculating the remaining capacity of the secondary battery 10 has, as in prior art, a function of monitoring the voltage of the

secondary battery 10 as well as the electric potential on each end of the current detection resistor 3 to measure a charge current, a discharge current, and the like. The measurement results are transmitted to an electronic device through the communication terminals 13 and 14 (upon request of the electronic device).

Paragraph beginning at line 7 of page 9 has been amended as follows:

To transmit a signal from the smart battery pack to the electronic device, a level shifter circuit as the one shown in Fig. 4 can be employed. In Fig. 4, a terminal A is connected to the terminal 11 of Fig. 1, a terminal C is connected to the terminal 12 of Fig. 1, a terminal B is connected to the terminal 13 or 14 of Fig. 1, and a terminal D is, connected to the minus side of the secondary battery 10 of Fig. 1. In the case of Fig. 2, an input signal having a voltage level between the terminal 11 and the terminal 12 is ~~sifted~~ shifted to an output signal having a voltage level between the terminal 11 and the low side of the secondary battery. In the case of Fig. 4, an input signal having a voltage level between the terminal 11 and the low side of the secondary battery is ~~sifted~~ shifted to an output signal having a voltage level between the terminal 11 and the terminal 12.

Paragraph beginning at line 7 of page 11 has been amended as follows:

A smart battery pack of the present invention can use an N-channel MOS transistor, which is inexpensive and has high performance, as a Lo-side switch. The present invention is therefore capable of providing an inexpensive, high-performance smart battery pack.